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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

### Division of Oil, Gas & Mining

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Executive Director

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ban/0H

### Inspection Report

#### Minerals Regulatory Program

Report Date: September 27, 2004

**Mine Name:** Skull Valley Diatomaceous Earth

**Permit number:** M/045/060

**Operator or Permittee Name:**

**Inspection Date:** September 24, 2004

Holcim US, Inc.

**Permittee Mailing Address:**

6055 E. Croydon Rd., Auxiliary Route 3, Morgan,  
UT 84050

**Inspector(s):** Paul Baker

**Weather:** Clear, 60's

**Inspection Start Time:** 9:30 AM

**Inspection End Time:** 10:15 AM

**Other Participants:** None

**Site location/Area Inspected (i.e. Pit #):**

Entire area

**Permit Status:** Active

**Surface Ownership:** BLM

**Current Acreages:**

**Mineral Ownership:** BLM

**Total Permitted (Bonded):** 4

**Mineral Mined:** Diatomaceous Earth

**Total Disturbed:** Exact acreage unknown; I estimate  
about 6 acres disturbed with 4 regraded

**Type of Mine:** Surface

Elements of Inspection	Evaluated	N/A	Comment	Enforcement
1. Permits, Revisions, Transfer, Bonds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Public Safety (open shafts, adits, trash, signs, highwalls)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Protection of Drainages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Explosives, magazines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Deleterious Material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Roads (maintenance, surfacing, dust control, safety)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Concurrent Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Erosion Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Demolition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Backfilling and Grading (trenches, pits, roads, highwalls, shafts, drill holes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Water Impoundments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Revegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Purpose of Inspection:** The primary purpose was to look at the vegetation and soils in reclaimed areas. The operator has proposed expanding the mine but did not include soils or vegetation data. I wanted to see how well vegetation was doing in the reclaimed area.

**Inspection Summary:**

**6. Roads**

The road going in to the mine (the North Trail) and the road going east from the mine (Center Road) are covered with gravel and have relatively little dust. Where Center Road goes through the mine, there is no gravel, and much of the road surface has dust up to several inches deep. The dust has the consistency of flour.

My point in making this comment is not that I feel the operator is in violation of any Air Quality standards. No operations were being conducted during the inspection, and there was a water truck on site. Rather, I was impressed how little dust there was on the graveled roads compared to the road without gravel.

**12. Soils**

The soil in the area that has been reclaimed appears to be very silty. It forms a soft surface crust, and I do not think water would infiltrate well into this crust. While there is some structure, it is weak.

Photo 1 was taken within the disturbed area, but I believe it shows some undisturbed soil and a very clear, sharp demarcation between the soil and underlying layers. The surface soil appears to have more sand than the soil used in reclamation.

I did not get a good picture of the material being salvaged as topsoil, but it appears to include both the darker, sandier material from the surface and some silty material from below.

I do not have information about the chemical nature of the soil or subsoil, but the undisturbed vegetation includes both basin big sage and greasewood. The presence of sagebrush tells me the soil is not too salty, but greasewood says there is some salt. I do not know if there is increased salt at depth.

Based on this inspection, I feel more strongly than ever that the plan needs to contain baseline soils information, especially considering the lack of revegetation success.

**13. Vegetation**

Vegetation in the reclaimed area appears to be 100 percent halogeton, Russian thistle, and kochia (Photo 2). The kochia tended to be in the bottom of the pit (Photo 3). I saw no desirable plants at all. There are several factors that could have contributed to this, including failure to plant seed, poor quality seed, poor timing of the seeding, bad weather conditions, lack of surface roughening, and poor quality soils.



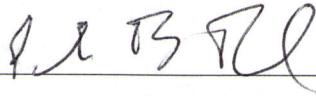
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The operator needs to do everything possible to maximize the chances for revegetation success at this difficult site. These include making sure the right soils are harvested and put back, planting in the fall and at no other time, using good quality seed from a reputable dealer, and keeping the surface very rough. Considering the nature of the soil, keeping a rough surface may be difficult, but it is very important.

Adjacent undisturbed areas also had a lot of halogeton, kochia, and Russian thistle, but sagebrush and greasewood were dominant (Photo 4).

**GPS data:** I did not take GPS data.

**Inspector's Signature** \_\_\_\_\_



**Date:** September 27, 2004

PBB:jb

cc: Lance Stephens, Operator  
Salt Lake BLM

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## ATTACHMENT

### Photographs

**Skull Valley Diatomaceous Earth Quarry, Holcim (US), M/045/060**  
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**Photo 1. A soil lens on the edge of the area being mined.**



**Photo 3. *Kochia scoparia* in the bottom of the pit.**

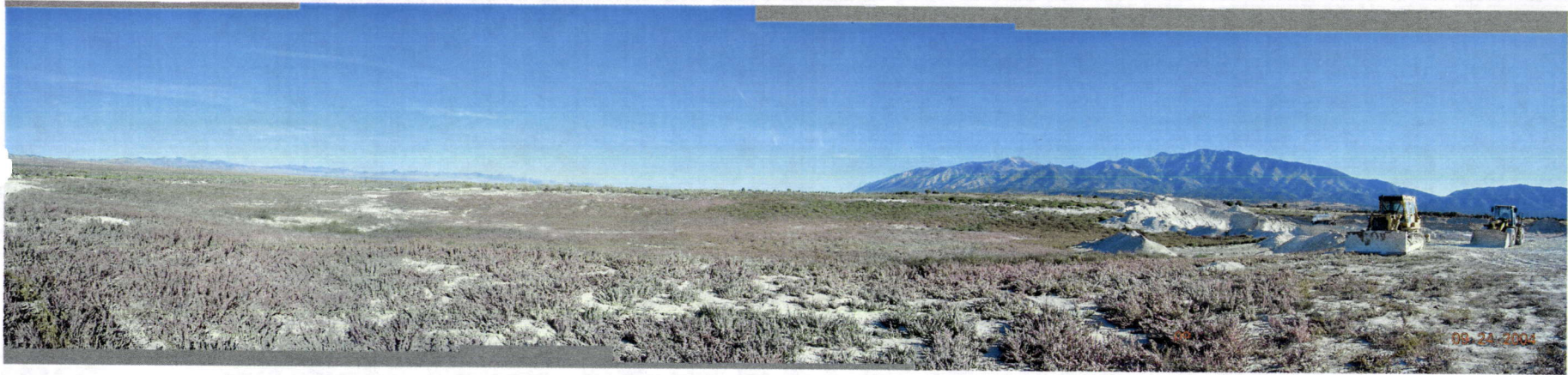


**Photo 2. The reclaimed area. Vegetation in the foreground is halogeton, and the greener plants in the background are mostly Russian thistle.**



**Photo 4. Vegetation in the adjacent undisturbed area. It is mostly sagebrush with greasewood, halogeton, cheatgrass, and Russian thistle.**





**Photo 5. Panorama of the reclaimed and active mining areas.**